

Notice of Allowability

Application No.

09/329,923

Applicant(s)

AGNES ET AL.

Examiner

Steven P Sax

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Examiner's Amendment 2/4/05.
2. ☒ The allowed claim(s) is/are 1-23.
3. ☒ The drawings filed on 10 June 1999 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 2/4/05
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

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1. An examiner's amendment to the record appears below. This was made to incorporate into all the independent claims that the descriptive information is specifically annotation information used for the physical construction of the real world object, and is filtered via a user interface to determine a subset of the annotation information to be placed on the two dimensional drawings. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Please rewrite all claims as follows:

1. (currently amended) A CAD/CAM software control method comprising:
generating a two-dimensional drawing from a three-dimensional computer defined model of a real-world object;
based on the three-dimensional model, automatically generating annotation information associated with a displayed component of the two-dimensional drawing, said annotation information setting forth information relevant to physical construction of the real-world object;
forming a user interface for controlling the addition of the annotation information to the two-dimensional drawing;
filtering the annotation information generated from the three-dimensional model to determine a subset of the annotation information to be placed on the two-dimensional drawing, said filtering being guided by user

input data interactively received at the user interface;

adding the filtered subset of the annotation information to the two-dimensional drawing ~~responsive to interactive user input data entered at the user interface to select a first subset of the automatically generated descriptive information that is to be added to the two-dimensional drawing,~~

and wherein the annotation information added to the two-dimensional drawing is configured for display in the two-dimensional drawing.

2. (previously amended) The CAD/CAM software control method of claim 1 wherein the annotation information is a measurement or a constraint.
3. (previously amended) The CAD/CAM software control method of claim 1 wherein the annotation information is added to the two-dimensional drawing semi-automatically responsive to the expiration of a predetermined time-out period and in the absence of an intervening user action.
4. (previously amended) The CAD/CAM software control method of claim 3 wherein the intervening action comprises activation of a pause button.
5. (previously amended) The CAD/CAM software control method of claim 1 additionally comprising the step of modifying the annotation information.
6. (previously amended) The CAD/CAM software control method of claim 1 further comprising tracking interactive user input data indicating that a second subset of the annotation information is not to be added to the two-dimensional drawing and, during a subsequent generation of the two-dimensional drawing, automatically determining that the second subset of annotation information should not appear in the generated two-dimensional view.

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7. (previously amended) The CAD/CAM software control method of claim 1 additionally comprising the step of stopping the generation of annotation information and forming an additional two-dimensional drawing.
8. (previously amended) The CAD/CAM software control method of claim 7 wherein a modification of the annotation information is reproduced in a subsequently formed two-dimensional drawing.
9. (previously amended) The CAD/CAM software control method of claim 1 additionally comprising selecting between an automatic or semi-automatic mode of annotation information generation, wherein selecting an automatic mode causes the software to branch and generate annotation information without requiring the formation of a user interface for controlling the addition of a subsequent annotation information item to the two-dimensional drawing and adds the annotation information item to the two-dimensional drawing without requiring activation of a user interactive device.
10. (previously amended) The CAD/CAM software control method of claim 9 additionally comprising selecting between an automatic or semi-automatic mode of annotation information generation, wherein the semi-automatic mode comprises a time-out period during which a user can activate a user interactive device causing the annotation information generation process to be paused.
11. (previously amended) The CAD/CAM software control method of claim 10 additionally comprising the step of modifying annotation information while the generation process is paused.
12. (previously amended) The CAD/CAM software control method of claim 10 additionally comprising the step of automatically generating additional annotation information following modification of the annotation information.

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13. (previously amended) The CAD/CAM software control method of claim 1 additionally comprising the step of filtering particular annotation information from the two-dimensional drawing.
14. (previously amended) The CAD/CAM software control method of claim 1 additionally comprising the step of filtering particular two-dimensional drawings from being formed.
15. (currently amended) A computer system for controlling generation of annotation information relating to a two-dimensional drawing of a three dimensional computer defined model of a real-world object, the system comprising:
 - a processor operatively interconnected to a memory, said memory comprising stored instructions to configure the processor to form the two-dimensional drawing of the three dimensional model of the real-world object and to automatically generate annotation information associated with the two-dimensional drawing based on the three-dimensional model, said annotation information setting forth information relevant to physical construction of the real-world object;
 - a user input device;
 - a display; and
 - a graphical user interface comprising user interactive devices wherein the system is responsive to activation of the user interactive devices to effect a semi-automatic mode of transfer of a subset of the annotation information, and wherein the system is configured to identify the subset based on data interactively received at the graphical user interface, said data being processed by instructions to filter the annotation information generated from the three-dimensional model to determine said subset of annotation information, said filtering being based the data interactively received at the graphical user itnerface.

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16. (previously amended) The computer system of claim 15 wherein the annotation information comprises a dimension or a constraint.

17. (previously amended) The computer system of claim 15 wherein the annotation information is added to the two-dimensional drawing semi-automatically responsive to the expiration of a predetermined time-out period without an intervening user action.

18. (currently amended) A computer program residing on a computer-readable medium, the program comprising instructions for causing a computer to:

form a two-dimensional drawing of a three dimensional computer defined graphical model of a real-world object;

based on the three-dimensional model, automatically generating annotation information associated with a component of the two-dimensional drawing, said annotation information setting forth information relevant to physical construction of the real-world object;

form a user interface for interactively controlling the addition of the annotation information to the two-dimensional drawing;

filter the annotation information generated from the three-dimensional model to determine a subset of the annotation information to be placed on the two-dimensional drawing, said filtering being guided by user input data interactively received at the user interface;

add ~~a the~~ selected subset of the annotation information to the two-dimensional drawing, ~~the program being configured to select the subset based on user input data interactively entered at the user interface;~~ and

configure the added subset of annotation information for display as graphical elements of the two-dimensional drawing.

19. (currently amended) A method of interacting with a CAD/CAM system to add annotation information to a two-dimensional drawing of a three dimensional model, the method comprising:

launching an application which includes a command to add annotation information in a semi-automatic mode, said annotation information setting forth information relevant to physical construction of the real-world object;

extracting annotation information from a three dimensional model of a real-world object;

automatically generating the annotation information on the two-dimensional drawing based on the three dimensional model; and

interactively modifying the generated annotation information based on input data received from a user, including determining a subset of the annotation information to be generated on the two dimensional drawing;

wherein the annotation information generated on the two-dimensional drawing is configured for display as graphical elements of the two-dimensional drawing.

20. (previously amended) The method of claim 19 additionally comprising the step of storing the modified annotation information.

21. (currently amended) A method of interacting with a computer so as to add annotation information to a two-dimensional drawing of a three-dimensional model of a real-world object, the method comprising:

launching an application which includes a command to add annotation information to a three-dimensional model of a real-world object in a semi-automatic mode, said annotation information setting forth information relevant to physical construction of the real-world object;

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defining a timeout period;

extracting annotation information from the three-dimensional model;

generating the annotation information on the two-dimensional drawing;

and

pausing the extraction of annotation information from the three-dimensional model; and modifying the generated annotation information based on input data received from a user, including determining a subset of the annotation information to be generated on the two dimensional drawing;

wherein the annotation information generated on the two-dimensional drawing is configured for display as graphical elements of the two-dimensional drawing..

22. (currently amended) A programmed computer for adding annotation information to a two-dimensional drawing of a three-dimensional model of a real-world object comprising:

a memory having at least one region for storing computer software code;

a processor operatively interconnected to the memory for executing software code stored in the memory, wherein the software code causes the computer to:

display a first user interactive interface for selecting specified annotation information, a drawing and selected views of the drawing, said annotation information setting forth information relevant to physical construction of the real-world object;

display a second user interactive interface for selecting between an automatic and semi-automatic mode of generating annotation information;

display a third user interactive interface for selecting step-by-step

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processing or time-out processing of annotation information;
generate annotation information based on the three-dimensional model of
the real-world object;
allow user modification of the annotation information;
store modified annotation information; and
add the annotation information to the two-dimensional drawing;
wherein the annotation information added to the two-dimensional drawing
is configured for display as graphical elements of the two-dimensional
drawing.

23. (Previously amended) The programmed computer of claim 22 wherein
the software code additionally causes the computer to:
display a fourth user interactive interface with a user interactive device for
entering a time-out period; and
an interactive user device for pausing the generation of drawing data,
whereby a user can modify the annotation information during the
pause.

2. Authorization for this examiner's amendment was given in a
telephone interview with Mr. James Mahon on 2/4/05.

3. The following is an examiner's statement of reasons for allowance:
The Examiner's Amendment puts the application into condition for allowance by
adding into all the independent claims that the descriptive information is
specifically annotation information used for the physical construction of the real

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world object, and is filtered via a user interface to determine a subset of the annotation information to be placed on the two dimensional drawings. The prior art do show various computer aided design and modeling systems, some which construct three dimensional models out of two dimensional views, but the present invention distinguishes over the art with the combined features in the presently amended claims including the ability to filter and determine via user interaction the subset of annotation information to be placed on the two dimensional drawings to be used for the physical construction of the real world object. The features combined, as currently recited in the amended claims, are not set forth in the prior art of record.

Independent claims: 1 amended – the method. 15 amended – the system. 18 amended – the computer program on readable medium. 19 amended – the method which brings out launching the application with the command to add the annotation information in semi-automatic mode. 21 amended – the method like 19 amended and with the timeout period and pause features. 22 amended – the personal computer with semi-automatic mode.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven P Sax whose

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telephone number is (571) 272-4072. The examiner can normally be reached on Monday thru Friday, 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid can be reached on (571) 272-4063. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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